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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of	) Before the
	) Board of Patent Appeals
Applicants: **Raja Chatterjee et al.**	) and Interferences
	)
Serial No. 09/496,086	)
	) Examiner Peter J. Smith
Filed: February, 1 2000	) Art Unit 2176
	)
Title: **Methods and Apparatus for Indexing and**	)
Searching of Multi-Media Web Pages	)

Commissioner for Patents
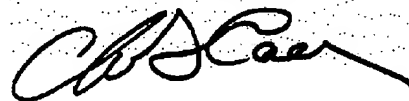P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

FAX TRANSMISSION COVER LETTER

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The attached Appellants' Reply Brief is being transmitted via facsimile to the central facsimile number of United States Patent and Trademark Office, (571) 273-8300, on February 6, 2006.

Respectfully submitted,

Dated: February 6, 2006

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Dear Sir

APPELLANTS' REPLY BRIEF

The scope of this reply

This brief responds to the Examiner's Answer mailed on December 7, 2005. In Section 9 at pages 3-12 of that Answer, the Examiner repeated the grounds for rejection as stated in the final rejection mailed April 26, 2005. Since the basis for the final rejection has already been addressed in appellants' Appeal Brief, the following comments are directed to the statements made in Section 10, the "Response to Argument," which appears on pages 12-15 of the Examiner's Answer.

Nelson does not suggest the claimed invention

The present invention uses conventional text-based Internet search engines to index and search the content of Web pages and the multimedia content, such as image, audio and video files, incorporated into those web pages by reference. As claimed, a Web page to be indexed is processed to identify the media data incorporated by reference into that Web page and to extract information describing the media data thus identified

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from the referencing Web page, from the media data itself, and from other sources. The extracted information is then inserted as text annotations into a copy of the original Web page to produce an enhanced Web page which may then be processed in the normal way by conventional text-based Internet indexing and searching facilities.

Nelson neither discloses nor suggests the invention. While the Examiner concedes in his Answer that Nelson does not expressly teach combining annotations with the original Web page to form an enhanced Web page as detailed in independent claims 1, 8 and 10, he nevertheless maintains his contention that Nelson "suggests" the subject matter claimed. Appellants submit that there is no such suggestion anywhere in the Nelson patent.

Nelson, like the appellants, describes a system for indexing and searching Web pages which contain references to external multimedia resources, such as image, audio and video files. In both systems, the Web pages are analyzed to identify the external multimedia objects, and then each such object is processed to generate metadata (tokens) describing the content of that external object. In both systems, this metadata may consist of character text, such as the words recognized by speech recognition processing of an audio file, or the words found in the close caption text of a video file.

But appellants' invention as claimed differs from Nelson's system in the way this metadata, once extracted from the multimedia files, are used to index and search for Web pages and referenced multimedia content.

As claimed, appellants' invention combines the extracted metadata with the original Web page to form an enhanced, annotated Web page that can then thereafter be indexed and searched in the normal way by conventional Internet search engines ("Web crawlers" or "spiders") such as those publicly available at www.hotbot.com, www.altavista.com, www.excite.com, www.lycos.com, etc.

But Nelson does not insert the extracted data into Web pages to form enhanced Web pages, and nowhere "suggests" doing so. Instead, Nelson instead sorts and processes the tokens to form an inverted file in which each token is stored with data identifying the positions in the Web pages where each reference to a multimedia object described by that token appeared.

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Contrary to the Examiner's assertion, one skilled in the art, reading Nelson, would not be motivated to use appellants' invention instead of Nelson's indexing system because, among other reasons, to do would destroy the workability of important functions which Nelson performs, including the ability to use the unified multimedia inverted index to perform numerous queries which conventional search engines cannot perform. For example, as Nelson notes at column 3, lines 6-18: *"a compound query can include text, image, audio, or video components, and search operators that define . . . proximity relationships (e.g. "NEAR", "within n") between the components. For example, a compound query may require that the word "beach" appear within 10 words of an image of a sunset. The present invention uses the position information in the multimedia index, along with the indexed data (e.g. color data) to find compound documents that have the desired text and have an image with image characteristics (e.g. color, texture, luminance) which match the input query image within the defined proximity relationship."* If Nelson's system were modified to place the extracted tokens as text meta tags in the original Web page, instead of placing the tokens into the unified index along with positional information and other associated data, such as color data,, such special query functions could not be performed.

Alternatively, if Nelson's inverted file indexing system was retained as taught in order to preserve its desired capabilities, it would serve no useful purpose to also insert the tokens into the Web page from which they can then be extracted to perform indexing, since those tokens are already available and placing them in the Web page would merely require additional processing and consume valuable Web page storage space without serving any useful purpose.

Specific arguments advanced by the Examiner

The Examiner notes that Nelson teaches that his system can be used to index HTML documents (Web pages), that the HTML standard teaches that text annotation (meta tags) can be included in a Web page, that conventional search indexes can use these meta tags to classify the document, and that Nelson thus "has knowledge of the advantages of imbedding character-based text annotations directly into the document to simplify the indexing of the document." From these observations, the Examiner then leaps to the conclusion that:

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"Therefore, the Examiner maintains the belief that Nelson suggests, via knowledge of HTML documents, to one of ordinary skill in the art at the time of the invention that it was advantageous to have imbedded character-based text annotations directly into the document itself."

But Nelson suggests no such thing. Nelson teaches a different way of indexing documents and nowhere "suggests * * * that it was advantageous to have imbedded character-based text documents directly into the document itself."

The Examiner then goes on to say that one of ordinary skill would have:

". . . considered modifying Nelson by imbedding rather than linking the character-based tokens into the multimedia documents, thus containing the metadata annotations within the document as is taught by the meta element of HTML. By embedding all of the tokens into the document, all of the meta data would have been extractable form a single source, the parent document, - thus simplifying the software extraction of the character-based text annotations for indexing the multimedia document.

This argument repeats a contention made in rejection mailed on January 31, 2005 that was dropped from the final rejection and now reappears in the Examiner's Answer. The contention is dealt with on page 7 of the Appeal Brief, and need be only briefly addressed here. One skilled in the art would not think that embedding the tokens in the document would *"simplify the software extraction"* as the Examiner claims. The tokens need to be extracted from the multimedia data in both systems. One skilled in the art would have no reason to modify Nelson's system to insert the tokens into a Web page and then take them out again. That modification would plainly complicate, not simplify, Nelson's system.

The Examiner suggests further that:

"Such a modification to Nelson would not render it unsatisfactory for its intended purpose because the intended purpose of Nelson is to provide a unified index of the multimedia document and all of its multimedia components and this is performed by the creation and indexing of the character-based tokens describing the content of the multimedia document and each of its multimedia components. Nelson fulfills its purpose of providing a unified index regardless of whether the character-based

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> *tokens are associatively linked to the document, or imbedded within the document. The indexing of the tokens would be the same regardless of where they are stored and Nelson would successfully commonly index the multimedia documents and their multimedia components either way.*

This contention ignores how Nelson's indexing scheme actually works. Nelson processes Web pages by first analyzing each Web page to identify references to external multimedia components (see Figs. 4 and 5), then processes each identified multimedia file (e.g. an image, audio or video file) to extract tokens (Fig. 6 and Figs. 7a-7d), and then places the token with associated reference data into the index (Fig.8) to yield the index structure illustrated in Fig. 9. Nelson's reference data stored with each token in the index describes, for example, the position of the multimedia component in the Web page (e.g. its character position or offset) and other type-dependent information useful for comparing instances of the same type of multimedia component, such as color, texture, and the like (Nelson, col. 3, lines 30-36)

If, as the Examiner suggests, the tokens were instead inserted into the HTML page as meta tags in the document header, a number of consequences would result: (a) the proposed modification would complicate rather than simplify Nelson's process because the inserted meta tags would need to be again extracted after they were inserted – an unnecessary step since they are already available to Nelson's system after being extracted from the multimedia object; (b) the addition of the meta tags, being unnecessary in Nelson's system, would "bulk up" the Web pages requiring greater storage capacity and serving no useful purpose; (c) by placing the tokens in meta tags in the HTML header, the token data would no longer be located where the reference tags were located, and the positional searching made possible by Nelson's reference data list 906 would no longer work as intended.

It is accordingly incorrect to state, as the Examiner does, that *"The indexing of the tokens would be the same regardless of where they are stored and Nelson would successfully commonly index the multimedia documents and their multimedia components either way. "* Nelson's indexing would not be the same if the tokens were stored in the Web pages rather than being stored with position and other data in the inverted file index

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structure taught by Nelson and numerous query functions which are important to Nelson's purposes would not function if the proposed modification was made.

In short, one skilled in the art would have no good reason to make the modification the Examiner suggests, and would have several very good reasons NOT to make the modification the Examiner suggests.

The Examiner's Answer did not address the facts advanced in the Appeal Brief that demonstrate non-obviousness

In Section 10 of the Examiner's, the Examiner merely restated his contentions, previously expressed, that claimed elements of appellants' invention are "suggested by" Nelson. But the Examiner has cited no teaching in Nelson to support of this contention; moreover, the Examiner has not addressed or attempted to refute the facts set forth in appellants' Appeal Brief that demonstrate that one skilled in the art would not be motivated to modify the Nelson system to yield the invention claimed instead of the system Nelson teaches.

The Examiner repeated the earlier contention that one skilled in the art would be motivated to modify Nelson's system in order to "simplify the software extraction," but the Examiner did not respond to the explanation on page 7 of the Appeal Brief that the proposed modification would complicate not simplify the Nelson's system.

The Examiner did not dispute that Nelson "teaches away" from using conventional text based indexing of Web pages which incorporate multimedia data as explained at page 8 of the Appeal Brief.

The Examiner did not dispute that the HTML specification nowhere suggests that meta tags could or should be used to describe a Web page's multimedia components as explained on page 8 of the Appeal Brief.

The Examiner did not dispute that, if metadata describing referenced multimedia content was placed in original Web page instead of being placed in an inverted file multimedia index as Nelson teaches, that modification would render Nelson's system unsatisfactory for its intended purpose as explained on pages 8-9 of the Appeal Brief.

Nor did the Examiner dispute that no useful purpose would be served by combining the multimedia data with the original Web page in addition to also placing that data into Nelson's inverted file index, since Nelson's inverted file index system can

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already perform the needed search functions and rewriting Web pages to include metadata would consume storage space without serving a useful purpose, as explained on page 9 of the Appeal Brief.

The Examiner has thus relied solely on his *ipse dixit* assertion that Nelson "suggests" these claimed elements of appellants' invention, when in fact Nelson plainly does not make any such suggestion, and indeed teaches a different solution that one skilled in the art would have no reason whatsoever to modify.

In this regard, it is submitted that Nelson faced the same problem but taught a different solution. There nothing in Nelson's teaching that would motivate one skilled in the art to depart from Nelson's teaching and instead do something entirely different; namely, process the Web pages and the referenced external multimedia objects to automatically produce enhanced Web pages so that conventional search engines, not a special purpose search engine of the type taught by Nelson, could be employed. Nelson teaches replacing conventional text based indexing and search facilities with facilities that are capable of indexing and searching both the text content of Web pages and the content of the multimedia data those pages refer to. Appellants' system uses existing search engines that are in place and already in use. Nelson teaches that such existing search engines have shortcomings and should be modified to be capable of indexing compound documents. Appellants' invention allows existing search engines to index and search for referenced multimedia data without requiring that those search engines be modified. Appellants' invention allows publishers of Web based multimedia content to process and enhanced that content so that it becomes more accessible without requiring the modifications to existing search engines that Nelson advocates. Nothing in Nelson suggests that that. Nothing in the HTML specification suggests that. Nothing but appellants' disclosure suggests that.

The Examiner's Answer also did not address the law cited in the Appeal Brief that demonstrate non-obviousness

Not only has the examiner ignored the facts, he has ignored the law. He has maintained his contention that the claimed invention would have been obvious in view of Nelson even though the only teaching or suggestion to combine extracted annotations describing referenced multimedia data with the Web page to form an enhanced web page

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is found, not in Nelson, but in appellant's disclosure. The Examiner has thus failed to establish a prima facie case of obviousness as required by *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and M.P.E.P. §2143.

Having identified no teaching of the claimed combination in Nelson, the Examiner relies on "the level of ordinary skill in the art" to provide that suggestion, contrary to *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).

The Examiner's reliance on the HTML specification as establishing the level of ordinary skill is misplaced. That specification permits annotations to be inserted into a Web page as meta tags, but nowhere suggests that these meta tags could be or should be generated by processing the content of multimedia data referred to in the Web page. The Examiner thus ignores the well established, common-sense principle that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) * * * Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992).

Finally, the Examiner ignores the well established law that where, as here, the proposed modification would render the system being modified unsatisfactory for its intended purpose, it cannot be said that references provide a suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) and M.P.E.P. §2143.01.

The Rejection of Claim 6

The Examiner concedes that Nelson does not teach combining the Web page with metadata describing a referenced multimedia resource where that metadata is obtained from the operating system that uses to access that resource as set forth in dependent claim 6. The Examiner contends that, because Nelson uses the operating system to access and process files that Nelson *"recognizes the benefit of collecting information from the operating system."* But those observations do not justify the conclusion to which the

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Examiner then leaps: that "*Nelson therefore suggests that the this (sic) metadata would be useful as actual information in character-based tokens . . .*" While it is true, as appellants' recognized, that information from the operating system, such file system time-stamp information indicating when referenced media data files were initially created and last modified, can be useful in an indexing system, there is no evidence whatsoever that Nelson recognized that fact, or converted any such information from the operating system into tokens, and certainly no evidence that Nelson generated an enhanced Web page containing such information. The Examiner's rejection of dependent claim 6 is completely unsupported by the facts.

Conclusion

The Examiner has failed to establish a *prima facia* case of obviousness. Nelson, the single prior art reference relied upon, fails to disclose the claimed invention, and the Examiner has cited nothing, other than his own argument, to substantiate his contention that Nelson somehow "suggests" the claimed invention. The facts, which the Examiner has ignored, demonstrate the opposite: Nelson teaches away from the claimed combination and one skilled in the art would not be motivated to modify Nelson as the Examiner proposes.

The final rejection of claims 1-17 should be reversed.

Respectfully submitted,

Dated: February 6, 2006   Charles G. Call, Reg. 20,406

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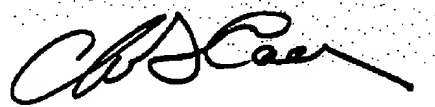## Certificate of Transmission under 37 CFR 1.8

I hereby certify that this *Appellant's Reply Brief is* being transmitted by facsimile to the central facsimile number of the U.S. Patent and Trademark Office, (571) 273-8300, on February 6, 2006.

Dated: February 6, 2006   Signature

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